

Iffat Sumia

PhD in Cell Biology

Data Science | Phenotypic Screening | Cell
Biology | Computational Biology | Drug
Discovery

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Resourceful and innovative Data Scientist and Experimental Biologist with a strong foundation in cell biology, bolstered by the application of computational techniques in bioimage and data analysis. Expert in phenotypic profiling of small molecules and biologics, with a proven track record in generating high-quality datasets that have led to the identification of novel drug discovery targets. I excel in end-to-end project execution within interdisciplinary teams and possess a deep commitment to advancing therapeutic development through computational drug discovery.

Experience

Servier R&D Institute – Postdoctoral Researcher

Apr 2021 – present

- Data Science team under Thierry Dorval
- Interdisciplinary project between the Screening Sciences and Data Science teams.
- Lead Servier initiatives in public private partnerships like IMI EUbOPEN, IMI MELLODY and Jump-CP.
- Contributed to phenotypic profiling and discovering drug targets.
- Generation and management of large-scale cell painting image.
- Wrote scripts for automated platforms and robotics within a high-throughput screening laboratory to expedite experimental workflows.
- Presented work at 6 international conferences (including a talk at PyData) and won awards, effectively disseminating scientific insights to the broader research community.
- Managed 1 person.

PyData Amsterdam 2023 Organizer

Sept 2023

- Co-Organizer and Session Chair, PyData Amsterdam 2023
- Orchestrated logistics, moderated sessions, and presented my own talk.
- Managed registration and oversaw main stage activities, ensuring a successful conference

Seedpods Day 2022/2023 Organizer

Jun 2021 – 2023

- Co-organized conference for young researchers at Servier. Involved a lot of management and team work, coordination with international partners, management of people and delegation of tasks.

CNRS/Institut Jacques Monod - Doctoral Researcher

2013 - 2018

- Computational bioimaging, Neuroscience and Cancer research.
- Integrated computational image processing techniques with traditional cell biology methods to analyze and interpret complex bioimaging data.
- Managed two students. Two publications.

YRLS Congress, Institut Curie Chairman and Treasurer

2015 - 2016

- International life sciences conference organized by students and post-docs. Led a team in managing the budget, getting sponsors and organization of this congress.

INSERM/Institut du Fer à Moulin – Internship

2012

- Fundamental research project in developmental neuroscience. Khalaf-Nazzal et al., 2013
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Education

PhD in Cell Biology

University Paris Diderot VII, Sorbonne, France 2014 - 2017

M.Sc. Molecular Biology

University Pierre and Marie Curie, UPMC, France 2011 - 2014

B.Sc. Biochemistry

University of Madras, India 2008 - 2011

Achievements

1. First place for best scientific pitch 2022 (PhDTalent Concours du Pitch Professionnel ABG)
 2. Audience Favorite - 2022 (PhDTalent Concours du Pitch Professionnel ABG)
 3. Seedpods Day 2022 - Third Best Flashtalk
 4. Featured in Forbes Magazine list of [92 Women To Follow Who Are Disrupting Tech In France](#) (2018) - number 16 in the category 'Tech Leaders'.
 5. L'Oreal-UNESCO Women in Science Fellowship top 1000 shortlisted candidate (2017)
 6. French Ministry PhD fellowship (2014)
 7. Governor's Award for exceptional girl scouts (2006)
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Publications (full list [here](#))

1. **Sumia I** et al., Comprehensive Cell Painting Dataset for Chemogenomic Profiling: Insights from the EUBOPEN Consortium Collection. *In preparation* (2024)
 2. Chandrasekaran SN et al., [JUMP Cell Painting dataset: morphological impact of 136,000 chemical and genetic perturbations](#). bioRxiv, 2023.03. 23.534023
 3. **Sumia, I.**, Pierani, A. & Causeret, F. (2019). [Kremen1-induced cell death is regulated by homo- and heterodimerization](#). *Cell Death Discov.* (2019) 5:91
 4. Causeret, F., **Sumia, I.** & Pierani, A. [Kremen1 and Dickkopf1 control cell survival in a Wnt-independent manner](#). *Cell Death Differ.* (2015).
 5. Khalaf-Nazzal, R., Bruel-Jungerman, E., Rio, J.-P., Bureau, J., Irinopoulou, T., **Sumia, I.**, ... Francis, F. (2013). [Organelle and Cellular Abnormalities Associated with Hippocampal Heterotopia in Neonatal Doublecortin Knockout Mice](#). *PLoS ONE*, 8(9), e72622.
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Presentations at Conferences

1. Society of Biomolecular Imaging and Informatics 2023 – Poster – Boston, USA.
 2. EUBOPEN Midterm Review –talk– European Parliament, Brussels, Belgium.
 3. PyData Amsterdam 2023 - lightning talk. Amsterdam, NL.
 4. YRLS 2023 - talk – Paris, France.
 5. Annual Meeting EUBOPEN, Leiden 2023 - opening scientific presentation. Leiden, NL.
 6. Seedpods Day 2023 - poster only – Paris, France.
 7. Seedpods Day 2022 - flash talk and poster (winner best talk)
 8. PhD Talent Competition - Winner and audience favorite - delivered a 2 minute pitch presenting my research work (in French).
 9. "Control of cell survival and death by novel dependence receptor" Oral Presentation ECDO European Cell Death Organisation, Geneva, Switzerland 2016.
 10. "Equilibrium between cell survival and death" Oral presentation YRLS Young Researchers in Life Sciences, Paris 2016.
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Key Skills and Competencies

- Proficient in computational drug discovery and design.
- Advanced skills in high-throughput screening and data analysis.
- Adept at interdisciplinary collaboration, with an emphasis on integrating computational and experimental approaches.
- Fluent in French and English.
- Tech stack: python, html, css.

